

MR1115-243

REMARKS

This case has been carefully reviewed and analyzed in view of the Office Action dated 19 June 2001. Responsive to the rejections made by the Examiner in that Office Action, Claim 1 as originally filed has now been amended, and Claims 10-12 are inserted for further prosecution. It is believed that with such amendment and insertion of Claims, there is a further clarification of Applicants' invention for this Patent Application.

In the Office Action, the Examiner rejected Claims 1-4 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Garney, et al. reference in view of the Watson, et al. reference. The Examiner stated that Garney, et al. discloses a USB-based wireless transmitting/receiving system whereby wireless communication is established between the computer host and a USB-based peripheral device. The Examiner acknowledged that Garney, et al. does not specifically disclose the receiving portion being connected to a computer host to apply the signal from the transmitting portion to that computer host. The Examiner cited the Watson, et al. reference for this feature, however, stating that Watson, et al. discloses a serial/parallel port signal converter for interconnection between a host and a peripheral device. The Examiner stated that the signal converter of Watson, et al. acts as a fully compliant bidirectional USB device, even though the host utilizes USB protocol and the peripheral device utilizes IEEE 1284 compliant protocol. The Examiner concluded from this that it would have been obvious to one skilled in the art to have incorporated the Watson, et al. signal converter into the Garney, et al. system to

MR115-236

arrive at Applicants' claimed system.

The Examiner rejected Claims 5-6 and 8-9 also under 35 U.S.C. § 103(a) as being unpatentable over the Garney, et al. reference in view of the Watson, et al. reference, and further in view of the van Bokhorst, et al. reference. In setting forth this rejection, the Examiner acknowledged that Garney, et al. and Watson, et al. fail to specifically disclose a power supply system having a controller which selectively supplies power to a central processing unit from primary and auxiliary power sources. The Examiner cited the van Bokhorst, et al. reference for disclosing a wireless transceiver 30 whose power is supplied via a switch 44, doze timer 46, and power management circuit 47 by a power line 42 connected to a built-in battery. The Examiner reasoned that it would have been obvious to one of ordinary skill in the art to have applied the power saving technique disclosed by van Bokhorst, et al. to the modified system of Garney, et al. and Watson, et al.

Applicants' claimed system is one which very simply and conveniently enables one or more USB-based peripheral devices to be wirelessly linked to a particular computer host. As newly-amended Independent Claim 1 now more clearly recites, Applicants' system includes among its combination of features "a computer host; and, at least one USB-based peripheral device operatively coupled directly to the computer host by a communications unit." That communications unit includes a receiving portion connected to the computer host and a transmitting portion connected to the each USB-

MR. 11-2-03

based peripheral device which transmits peripheral device-generated signals over a wireless link to the receiving portion for delivery to the computer host.

As newly-inserted Independent Claim 10 clearly recites, moreover, "each...transmitting and receiving portion ha[s] a primary power source, at least one auxiliary power source, and a controller coupled thereto." The controller "selectively actuat[es] one of said primary and auxiliary power sources."

Turning to the Garney, et al. reference primarily relied upon by the Examiner, the reference does disclose utilizing a wireless link in a USB system. What may not be immediately apparent, however, is that the disclosed wireless link exists only between discrete host controllers, not between a host controller and any other peripheral device directly associated therewith. As the reference's title itself very clearly notes, the disclosed method and apparatus are "FOR IMPLEMENTING A WIRELESS...HOST CONTROLLER."

Unlike Applicants' system, wherein "at least one USB-based peripheral device [is] operatively coupled directly to the computer host...by a wireless link" (newly-amended Claim 1), Garney, et al. prescribes all USB devices 261, 266, 441, 451 to be linked to a particular host controller 240, 420 only through wired means - via USB cables 260, 265, 440, 450. The wireless link is reserved only for communications between separate host controllers, through a wireless system side module 421 and wireless remote module 422 of the second host controller 420. The reference does set out to realize a method and

MR 115-138

apparatus "for connecting USB devices onto a USB system implementing the current technologies for transmitting wireless signals," (Column 1; Lines 61-63). Recognizing, though, that the "round trip response time delay requirements for USB systems make it difficult to implement a wireless link for configuring a wireless module onto a USB system," (Column 1; Lines 47-48), the reference chooses an approach whereby the communication path between a first host controller and remote USB devices 441, 451 is effectively broken into two separate wire transmission segments - the first between the host controller 240 and those components coupled by USB cable thereto and the second between the second host controller 420 and the components coupled by USB cable thereto, such as USB devices 441, 451.

The system is software-configured such that "the round trip response time delay requirement applies to transmissions" within these wire transmission segments, "but not [to] the wireless transmissions" occurring between the segments (Column 6; Lines 18-19 and 18). The disclosed system thus establishes in the second controller 420 essentially a surrogate host for the first host controller 240 such that the potentially problematic wireless transmissions may be isolated between the two wire transmission segments. Hence, Garney, et al. hardly teaches any "wireless link" between "a computer host" and "at least one USB-based peripheral device operatively coupled directly" thereto. The reference instead prescribes quite the opposite - establishing a hardwired connection between a host controller and such USB-based peripheral device. This ensures that "the

MR1115-268

round trip response time delay requirement" remains satisfied (and not rendered "difficult to implement" by a wireless link).

The distinction in Garney, et al.'s wireless link between separate host processors from Applicants' wireless link between a computer host and its USB device is no less significant than the distinction between a corded electronic appliance that happens to be plugged into a portable generator not having any corded connection to a building's electric outlet and a cordless electronic appliance operated without any corded connection at all neither to a portable generator nor to the building's electric outlet. The distinction is underscored by the fact that even the USB devices 441, 451 connected to the second controller 420 are connected via a hub 431 in much the same way that the USB devices 261, 266 connected to the host controller 240 are connected via a USB hub 250.

Newly-inserted Independent Claim 10 accordingly recites among its combination of elements "a single computer host" and "a communications unit wirelessly coupling...[a] USB-based peripheral device to said computer host." The Claim also recites among its features "each said...transmitting and receiving portion" of the communications unit "having a primary power source, at least one auxiliary power source, and a controller coupled thereto" for "selectively actuating one of said primary and auxiliary power sources." Such features are nowhere even suggested by the Garney, et al. reference.

MR1115-246

In view of the contrary teachings of Garney, et al., the secondarily cited Watson, et al. and van Bokhorst, et al. references would each appear to be wholly ineffectual to the present patentability analysis. The USB to parallel bus signal converter of Watson, et al. necessarily contemplates a physical interconnection thereof to the given devices using the different communications protocols. The van Bokhorst, et al. system contemplates use of its power saving function within a wireless local area network system wherein the wireless coupling is realized between the network's wireless stations, and not between any computer host and its USB-based peripheral device.

It is respectfully submitted, therefore, that the cited Garney, et al., Watson, et al., and van Bokhorst, et al. references, even when considered in combination, fail to disclose the unique combination of elements now more clearly recited in Applicants' pending Claims for the purposes and objectives disclosed in the subject Patent Application.

The other references cited by the Examiner but not used in the rejection have been reviewed, but are believed to be further remote from Applicants' system when patentability considerations are taken into account.

MR1115-218

It is now believed that the subject Patent Application has been placed in condition
for allowance, and such action is respectfully requested.

Respectfully submitted,
For: ROSENBERG, KLEIN & LEE



Jun Y. Lee
Registration #40,262

Dated: 9/17/2001

Suite 101
3458 Ellicott Center Drive
Ellicott City, MD 21043
(410) 465-6678

JYL/ds



04586

PATENT TRADEMARK OFFICE